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AUTHOR Alvir, Howard P.
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ABSTRACT

Guidelines for establishing and evaluating Vocational-Occupational-Technical Education (VOTE) Programs for deaf secondary school students are presented along with a brief discussion of the role of the teacher and teacher competencies essential in working with deaf students. A checklist which can be used to aid teachers in the identification of needs and priorities of both students and teachers in terms of additional programs and special staff is included in the document. Also provided is a survey questionnaire which is designed to elicit information from the student which can be useful in determining learning and learning potential. (EVH)

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FOR
CLEARINGHOUSE ON
TESTS, MEASUREMENT, AND EVALUATION

TITLE

THE EVOLUTION OF AN EVALUATION DESIGN FOR EVALUATING SECONDARY PROGRAMS FOR THE DEAF IN VOCATIONAL-OCCUPATIONAL-TECHNICAL EDUCATION (V.O.T.E) PROGRAMS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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AUTHOR

Howard P. ALVIR, Ph.D.

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Howard P. ALVIR, Ph.D.
27 NORWOOD STREET
ALBANY, NEW YORK 12203

DATE

February 23, 1975

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INTRODUCTION

The evaluation of VOCATIONAL OCCUPATIONAL TECHNICAL EDUCATION (V.O.T.E) programs is an area in which Dr. Alvir has produced several ERIC microfiche, for example :

ED 103-640 INTRODUCTION TO CAREER PATH EMPLOYABILITY PROFILES

ED 103-668 DEVELOPING OCCUPATIONAL MODULES THAT CAN ADD UP TO CAREER AND EMPLOYMENT DURING STAGFLATION

ED 104-914 EVALUATING COOPERATIVE EDUCATION

ED 107-696 DEVELOPING CRITERION MEASURES FOR CAREER PATH MODULES AND INDEPENDENT LEARNING MATERIALS

ED 108-042 EVALUATING THROUGH COUNTING LEARNER BENEFITS

ED 110-631 MOTIVATING TEACHERS IN TRAINING TO WORK WITH CAREER PATH TRAINING MODULES

When evaluating VOTE programs for the deaf, Dr. Alvir has pioneered the use of "occupational effects" as a way of keeping score. Thus, each program is specified in terms of predetermined occupational effects on deaf students. For example, an important program component is TRANSPORTATION to and from school. As a result of this program component, deaf students should be able to :

A. Travel back and forth to school (or to work)
   1. Independently
   2. On public transportation
   3. With available resources

B. Explain the importance of punctuality, regularity, and planning ahead in case of unforeseen emergencies.

C. Obtain accurate transportation schedule information :
   1. Through available visual sources
   2. Without the continual assistance of a translator or signer

A, B, and C above are typical "occupational effects" of the "program component" identified as TRANSPORTATION.

EVALUATION THROUGH "OCCUPATIONAL EFFECTS" ON DEAF STUDENTS

Once a program is described in terms of program components which are linked to observable OCCUPATIONAL EFFECTS, evaluation becomes a simple matter of verifying the presence of the PREDETERMINE and HIGH PRIORITY occupational effects desired by the program.

EVALUATION MEASURES CAN INCLUDE but are not limited to the following :

STUDENT (DEAF) PERCEPTIONS
VERIFICATION BY THE FULL TIME DEAF COORDINATOR
PERCEPTIONS OF STAFF AND ADMINISTRATORS

This document is intended to provide the EVALUATION RESEARCHER WITH THE FOLLOWING :

	PAGE
GENERAL OBJECTIVES	3
SPECIFIC OBJECTIVES	4
PRETEST DATA indications	5
IDEAS on zeroing in on teacher competencies needed to work with deaf students	6
	6
SPECIAL CONSIDERATIONS in working with the deaf	7
AN INTRODUCTION TO 4b deaf evaluation design	9
A COMMUNICATION SURVEY (this is not original work)	12
SAMPLE questions to be used in measuring EMPLOYABILITY	15

On the positive side, the following first draft attempts at general objectives, specific objectives, and pretest data give a benchmark idea of where to begin. In each one of the subsections of these three research components, specific data has been identified.

From an evolutionary point of view, this information can be used to come up with something much more simple and direct.

Practical Application

Since each researcher has a different mandate and a different set of resources, it is worthwhile to look over the following two pages on general objectives, specific objectives, and pretest data.

Such an analysis will help the reader identify a wide variety of concerns, some of which might be locally applicable.

GENERAL OBJECTIVES

It can be assumed that the objectives in special programs for the deaf include the following general objectives and specific objectives.

General Objectives

1. Increase the choices in occupational training opportunities for deaf people.

2. Increase the number of available alternative delivery systems for vocational training.

3. Encourage BOCES and other vocational schools to accept deaf students.

4. Increase the numbers of deaf students who are employed at levels commerate with ability.

5. Provide occupational programs with more and better resources for serving deaf clients.

Specific Objectives

1. Contrast the list of available occupational training opportunities for deaf people in 1970, 1971, 1972, 1973, 1974, 1975, and 1976 on a regional basis.

2. Contrast the list of available delivery systems for occupational training opportunities for deaf people available in 1970, 1971, 1972, 1973, 1974, 1975, and 1976.

3. Contrast the actual enrolment statistics for deaf students in BOCES and other occupational education programs in a given region for 1970, 1971, 1972, 1973, 1974, 1975, and 1976, on a school by school basis, including both the sending school and the receiving school.

4. To describe the employment of deaf students by level of employment for 1970, 1971, 1972, 1973, 1974, 1975, and 1976, with special emphasis on what would be the level of employment of individual students if entry into this program had not taken place.

5. To describe for the years 1970, 1971, 1972, 1973, 1974, 1975, and 1976, the resources available in the regional BOCES for serving deaf clients.

6. To list the adjustments deaf people must make in order to function effectively in BOCES programs.

7. To identify problems common to deaf people in a regular BOCES setting and recommended remedial action for each problem.

8. To list teaching procedures that are perceived by deaf people as new and better teaching procedures.

Pretest Data

Is it true that the vocational status of young deaf adults is lower than the general population as evidenced by:

1. A larger proportion of deaf workers in semi-skilled and unskilled positions.

2. Lower average wages for deaf workers in selected occupations.

3. A higher percentage of unemployment for deaf workers in selected occupations.

4. Limited chances for advancement without additional training not required of non-deaf workers in selected occupations.

5. Communication difficulties for deaf workers.

The following questions are asked. What does the literature say about:

1. The achievement levels of deaf students as measured by reading skills.

2. The achievement levels of deaf students as measured by arithmetic skills.

3. The achievement levels of deaf students as measured by skills in social studies, science and language.

4. The achievement levels of deaf students as measured by social skills.

5. The achievement levels of deaf students as measured by vocational skills.

ZEROING IN ON

TEACHER COMPETENCIES FOR

WORKING WITH THE DEAF

The following page, SPECIAL CONSIDERATIONS IN WORKING WITH THE DEAF, is intended to zero in on the problem of teacher competencies. This page contains a brief summary of what every teacher of the deaf should know. Some of the information contained on this page will vary from person to person, but this information is indictative of the typical deaf person as described in the literature.

As is obvious in the 8 points used to sum up the page, deaf people have a wide variety of needs. The teacher of the deaf must be aware of these needs in order to succeed in effecting educational progress.

Two rules emerge:

Rule 1: Some of the needs of the deaf are the same as the needs of the teacher of the deaf.

Rule 2: Some of the needs of the deaf are quite different from the needs of the teacher of the deaf and from the needs of hearing people in general.

The page following special considerations, APPROPRIATE COMPETENCIES FOR WORKING WITH THE DEAF, is intended to show the teacher of the deaf what can be learned to become a better teacher when working with deaf individuals.

This page is intended to serve as a training plan and guideline for individual growth. As a pretest, this page enables the teacher to identify those competencies already possessed. As a progress exam, this page enables each teacher to check off the date of accomplishment for each competency. As a posttest, this page enables a teacher of the deaf to verify the attainment of necessary competencies.

SPECIAL CONSIDERATIONS

IN WORKING WITH THE DEAF

Communicating with the deaf student is a problem. There is a need for technicians who can work with deaf students. These technicians need a special training program.

Some vocational, occupational, and technical education (VOTE) areas do not present insurmountable barriers to deaf students. These areas of specialty should be identified. Deaf students can succeed in these areas where trainees are not required to possess a high level of language capability.

Educational programs for the deaf are expensive. The largest expense is in personnel. Some of the services rendered by personnel to the deaf can be performed by paraprofessional and subprofessional teachers. Even volunteers can be considered.

Deafness is not the same in each deaf individual. For example, a person born deaf is different from a person who was deafened later in life.

The needs of the deaf go beyond hearing. For example, in addition to having interpreters and signers to communicate verbal messages, some deaf individuals need help from tutors who can communicate without speech.

Deaf people have a wide variety of needs. Deaf people need:

1. Remunerative and challenging employment
2. Non-verbal communication situations
3. Social skills
4. Community activities
5. Emotional development
6. Individualized instruction that is not language-intensive
7. Professional training
8. Social development, recreational activities, community life, and personal life

APPROPRIATE COMPETENCIES

FOR WORKING WITH THE DEAF

Individuals working with the deaf should demonstrate the following competencies:

1. To describe and discuss:

   A. Implications of deafness in areas of human development and behavior

   B. Special and unique needs of the deaf

2. To demonstrate skills in:

   A. All communication processes appropriate for use with the deaf including signing and interpreting

   B. Use and general maintenance of specialized auditory equipment

   C. Use and general maintenance of audio-visual equipment and other learning materials

   D. Preparation of learning materials specially designed for the deaf

   E. Coordination of academic learning with practical life experience for the deaf

3. To serve as:

   A. Communications support systems for the deaf

   B. Providers of needed services to individuals with a variety and/or combination of handicaps

   C. Coordinator of training and services for:

      1) Parents, parent models, or foster parents
      2) Professionals for the deaf such as counselors, psychologists, school administrators, teachers, nurses, hospital personnel, supervisors, and employers
      3) Paraprofessionals who must work with the deaf in highly technical areas

Paragraph 1 enables the evaluator to identify priority needs as perceived by a variety of audiences.

Paragraph 2 enables the evaluator to document why a particular population perceived a particular item as a high priority need.

Paragraph 3 enables the evaluator to categorize the needs of the deaf in familiar categories found in the literature. In addition, any new category perceived locally can be added on EITHER as a new category OR an a subdivision of an existing category.

Paragraph 4 enables the evaluator to zero in on the specific supportive services rendered to the deaf person. Similarly, additional services should be identified, described, and placed in existing categories before creating a new category. This will help systematize program activities and program evaluation.

Paragraph 5 enables the evaluator to examine measurable objectives that respond to clearly identified needs, priorities, categories of service, and categories of supportive services. This detailed analysis conducted before the evaluation is one of the surest ways to avoid duplication and to make sure that an evaluation result -- even a negative evaluation result -- has a specific clear-cut interpretation. Such a step is progress along the road toward accountability.

Paragraph 6 enables the evaluator to link each program component (such as coordinator's job description, program activities, and articulation plans) to clearly formulated and measurable objectives. On a modular TV set, a defective function leads to the removal and replacement on an entire interrelated system. In a modular evaluation, the identification of a defective performance or unsatisfactory performance leads to the identification of an inefficient system as far as the objectives of the program are concerned. Of course, common sense would indicate that several program activities are related to different objectives. If all of the objectives related to a particular program component do not succeed, it might be worthwhile to consider the possibility of eliminating this program component. On the other hand, when some of the objectives developed by a particular program component succeed, and others do not succeed, it is reasonable to look elsewhere for the source of this result.

Paragraph 7 enables the evaluator to specify beforehand the exact measurement tool to be used. Instead of coming up with global evaluations that brand the proposal as either successful or unsuccessful, productive or unproductive, efficient or inefficient, this approach to measurement enables a diagnostic evaluation to be performed. A diagnostic evaluation means identifying what is wrong and correcting it before too much harm is done. Once evaluation items are clearly linked to specific, small scale, and selected program components, something can be done before it is too late. If a program evaluator knows that a number count will be used to judge a certain item in June, this program evaluator can take corrected action in January when the half way count is not up to expectations. Waiting until June will probably too late.

4b DEAF EVALUATION DESIGN

INSTRUCTIONS	EVALUATION DESIGN COMPONENTS
1. Write in one of the top three priority needs of your project. Identify this need as #1, #2, or #3.	1. PRIORITY NEED #____ is :
2. Write in the basis for identifying and documenting this need?	2. THIS PRIORITY NEED WAS IDENTIFIED AND DOCUMENTED ON THE FOLLOWING BASIS :
3. Identify the area of this priority need by indicating the category or categories in which this need can be placed.	3. THIS PRIORITY NEED IS--IN MY JUDGMENT--IN THE FOLLOWING CATEGORY (OR CATEGORIES) CHECKED: ___ needs of deaf students ___ needs of the host facility ___ need for supportive services ___ needs of the staff to work with deaf students ___ need for funding
4. IF THE NEED IDENTIFIED IS FOR SUPPORTIVE SERVICES, identify the exact nature of the supportive service(s).	4. THE SUPPORTIVE SERVICES RELATED TO THIS NEED INCLUDE--IN MY JUDGMENT--THE FOLLOWIN SERVICE(S) CHECKED: ___ special classes ___ tutoring ___ interpreting ___ note taking ___ voc. counseling ___ personal-social services ___ voc. placement ___ speech and heari services ___ communication training for de ___ communication training for instructors ___ supervised healt ___ OTHER: please

INSTRUCTIONS	EVALUATION DESIGN COMPONENTS
5. Formulate measurable objectives to respond to the need(s) identified. Make sure that each measurable objective specifies the expected or acceptable level of performance. If specific products are desired, make sure that each product is described in enough detail to be recognized and evaluated by a third party evaluator.	5. THE MEASURABLE OBJECTIVES THAT RESPOND TO THE ABOVE NEEDS ARE :
6. Identify project components (such as coordinator's job descriptions, program activities, and articulation plans) that are related to the objectives formulated above.	6. THE FOLLOWING PROJECT COMPONENTS ARE DIRECTLY RELATED TO OBJECTIVE #1: THE FOLLOWING PROJECT COMPONENTS ARE DIRECTLY RELATED TO OBJECTIVE #2:
7. Specify the evaluation plan, techniques, measures, instruments, and so forth to be used. Make sure that there is at least one means specified for evaluating each objective. Make sure that for each objective an evaluation means is specified that can be performed by a third party evaluator.	7. THE EVALUATION MEANS TO BE USED TO MEASURE OBJECTIVE #1 IS : THE EVALUATION MEANS TO BE USED TO MEASURE OBJECTIVE #2 IS :

The following page, COMMUNICATION SURVEY, is helpful in coming up with matched pairs of deaf students.

Obviously, the matched pairing must be done on two sets of criteria:

Set 1: Learning potential

Set 2: Hearing potential

This questionnaire can obviously be revised for varying local conditions and availability of comparable data.

In the questionnaire itself, no specifics have been made of learning potential since the available data will vary from site to site.

MANY OF THESE QUESTIONS HAVE APPEARED
SO OFTEN
IN SO MANY UNRELATED PUBLICATIONS
WITHOUT ANY SPECIFIC ACKNOWLEDGEMENT
THAT IT IS PRESUMED THEY BELONG
IN THE PUBLIC DOMAIN.

COMMUNICATION SURVEY

1. Name: _____
(First) (Middle) (Last)

2. Date of Birth: ____/____/____
(Month) (Day) (Year)

3. What caused your hearing loss: _____

_____

4. In what year did this happen: _____

5. My hearing loss is "total, severe, slight" _____

6. Hearing loss in better ear. Check the answer that is most nearly correct, even if it is not exactly right.

a) 20-29 decibels ☐
b) 30-39 decibels ☐
c) 40-49 decibels ☐
d) 50-59 decibels ☐
e) 60-69 decibels ☐
f) 70-79 decibels ☐
g) 80 or over ☐
h) Don't know ☐

7. State your percent of hearing loss: _____%

8. Place an "x" in the right spaces below to show the hearing of relatives.

Relative	Deaf	Hard of Hearing	Normal Hearing
Wife	☐	☐	☐
Husband	☐	☐	☐
Mother	☐	☐	☐
Father	☐	☐	☐
Any grandparent	☐	☐	☐
One brother	☐	☐	☐
Two brothers	☐	☐	☐
More brothers	☐	☐	☐
One sister	☐	☐	☐
Two sisters	☐	☐	☐
More sisters	☐	☐	☐

15

9. Hearing ability without a hearing aid. Check yes or no for each statement.

Can You Hear:

Very loud noises	YES ___	NO ___
Some speech sounds if spoken very loud	YES ___	NO ___
Some speech sounds spoken normally loud	YES ___	NO ___
Some speech sounds spoken in a whisper	YES ___	NO ___
Can you understand some words normally loud even if you are not looking at the person who is talking?	YES ___	NO ___

10. Hearing ability with a hearing aid. Check yes or no for each statement.

Can You Hear:

Very loud noises	YES ___	NO ___
Some speech sounds if spoken very loud	YES ___	NO ___
Some speech sounds spoken normally loud	YES ___	NO ___
Some speech sounds spoken in a whisper	YES ___	NO ___
Can you understand some words normally loud even if you are not looking at the person who is talking?	YES ___	NO ___

11. Do you lip read? YES ___ NO ___

If so, where did you learn this? _____

12. My lip reading is poor, fair, good? _____

13. How much can you understand by lip reading? Check one.

☐ Very little
☐ Some, but often ask people to repeat or speak slowly
☐ Most of what is said, but sometime ask people to repeat or speak slowly
☐ Amost everything and rarely ask people to repeat or speak slowly
☐ Everything that is said no matter who is talking or how fast they talk

MEASURABLE OBJECTIVE	EVALUATION MEANS
Job Satisfaction	
Deaf students who have held the same job for at least 6 months will be able to list more things liked about a specific jobs than things disliked about a specific job.	1. Six months after the completion of training and after placement on the job, deaf students will be asked to list BOTH the things liked about a particular job title AND the things disliked about a particular job title.
	2. Comparisons will be made about the quality and quantity of the things liked and disliked about the job. It will be noted whether or not the likes outweigh the dislikes.
Career Ladder	
Deaf students on the job for at least a year will find that _____% of the jobs involve definite career ladders leading to satisfying and challenging employment careers rather than to dead-end jobs.	3. One year after the completion of training and after placement on the job, deaf students will be asked to list job titles that are obviously part of an upward career ladder as well as job titles that seem to be dead-end jobs.
	4. A study will be made comparing the quality, quantity, and relative percentages of career ladders versus dead-end jobs.

EMPLOYMENT

MEASURABLE OBJECTIVE	EVALUATION MEANS
Employment (Trained) Among deaf students finishing the program and available for employment, _____% will be employed in the occupation for which they were trained.	1. Last year's data on employment in area of training and in related areas will be obtained for deaf students: a) receiving special 4b training b) not receiving special 4b training
Employment (Related) Among deaf students finishing the program and available for employment, _____% will be employed in the occupation related to their training.	2. This year's data will be obtained on the same populations and for the same subgroups. 3. Comparisons will be made: a) difference between special training and no special training b) expected increases as a result of one or two years of special training

REMUNERATIVE EMPLOYMENT

MEASURABLE OBJECTIVE	EVALUATION MEANS
Minimum Wage The student (or ___% of the students) will demonstrate remunerative employment by earning at least the minimum wage.	1. Last year's data on the percentages of all students working for at least the minimum wage will be compared with similar data on deaf students: a) receiving special 4b training b) not receiving special 4b training 2. This year's data will be obtained on the same populationsand for the same subgroups.
More Than Minimun Wage The student (or ____% of the students) will demonstrate remunerative employment by earning at least _____% above the minimum wage.	3. The same type of data will be gathered on the same populations and for the same subgroups concerning those earning _____% above the minimum wage.
Psychological Compensation The student (or ____% of the students) will demonstrate remunerative employment on a psychological scale when working for less than the minimum wage by citing at least _____reasons for accepting less than the minimum wage.	4. Deaf students earning less than the minimum wage will be classified into two categories: a) those satisfied with the wage because of psychological compensation b) those not satisfied with the wages 5. The above two groups will be differentially compared on the basis of whether or not special 4b training was received. 6. A list of occupations will be developed that offer special psychological compensation to deaf students. Not all of these occupations necessarily will pay below the minimum wage.

SAMPLE EVALUATION INSTRUMENT QUESTIONS

Program Component

Transportation

Occupational Effect

The student should be able to travel back and forth to school (or to work) independentl on public transportation, and with available resources.

Related Questions

YES NO 1. Public transportation includes such things as city and suburban buses, trains, subways, and car pools.

YES NO 2. A taxi cab is one of the most expensive forms of public transportation.

YES NO 3. I know how to use inexpensive public transportation.

YES NO 4. I actually use inexpensive public transportation once a week or more.

YES NO 5. I plan to use my own car to get back and forth to work.

YES NO 6. Until I get a car, I expect to use public transportation to travel back and forth to work.

YES NO 7. I expect to have no difficulty using public transportation to get to work.

YES NO 8. Going to the occupational center has made me more independent in using public transportation.

Program Component

Transportation

Occupational Effect

The student should be able to explain the importance of punctuality, regularity, and planning ahead in case of unforeseen emergencies.

Related Questions

YES NO 1. Punctuality means getting to work on time.

YES NO 2. Employers do not want workers to be late for the job.

YES NO 3. Tardiness means being late for school, for a class, or for work.

YES NO 4. Going to the occupational center has taught me the importance of being on time.

YES NO 5. Over the last few months, I have maintained a good record of being on time for school and classes.

YES NO 6. Regularity means going to work every day even when you feel a little bit tired or bored.

YES NO 7. An absence means not going to school or the job for one day or more.

YES NO 8. Employers don't like workers to be absent unnecessarily.

YES NO 9. An excused absence is permitted when you are really sick or excused for a good reason.

YES NO 10. An unexcused absence means you are absent from school or from the job without a good reason.

YES NO 11. During the last few months, I have had no unexcused absences.

Program Component

Transportation

Occupational Effect

The student should be able to obtain accurate transportation schedule information through available visual sources and without the continual assistance of a translator or signer.

Related Questions

YES NO 1. I know how to find out where to catch the bus.

YES NO 2. I know when to catch the bus.

YES NO 3. I know what to do to get more bus information.

YES NO 4. If my car (or car pool) broke down, I would know where and when to catch the bus.

YES NO 5. If I got up late one morning, I would know where and when to catch the next bus.